

US-PAT-NO: 6468698

DOCUMENT-IDENTIFIER: US 6468698 B1

TITLE: Lithium ion secondary battery and method of fabricating the same

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87 parts by weight of  $\text{LiCoO}_2$ , 8 parts by weight of powdered graphite and 8 parts by weight of a polyvinylidene fluoride were dispersed in N-methylpyrrolidone (hereinafter referred to as "NMP") to prepare an positive electrode active material paste. The positive electrode active material paste thus prepared was then formed into a thin active material layer having a thickness of 300  $\mu\text{m}$  by a doctor blade coating method. On the top of the thin active material layer thus formed was then placed an aluminum net having a thickness of 30  $\mu\text{m}$  as a positive electrode collector. Onto the top of the aluminum net was then coated the positive electrode active material paste to a thickness of 300  $\mu\text{m}$  by a doctor blade coating method. The coated material was then allowed to stand in a 60.degree. C. drier for 60 minutes so that it was half-dried to form a laminate of a positive electrode collector 2 and an active positive electrode. The laminate was then rolled to a thickness of 400  $\mu\text{m}$  to prepare a positive electrode 1 comprising an positive electrode active material layer 3 formed thereon. The positive electrode 1 was dipped in an electrolytic solution, and then measured for peel strength of the positive electrode active material layer 3 with respect to the positive electrode collector 2. The results were from 20 to 25 gf/cm.

The negative electrode 4 was dipped in an electrolytic solution, and then measured for peel strength of the negative electrode active material layer 6 with respect to the negative electrode collector 2. The results were from 10 to 15 gf/cm.

The lithium ion secondary batteries obtained in the foregoing Embodiments 1 to 11 and Comparative Examples 1 to 3 were then evaluated for properties. Table 1 shows the results of measurement of the adhesive strength (peel strength) of the positive electrode 1 and the negative electrode 4 with respect to the separator 7 and the electrical resistivity of the battery (cell).

| TABLE 1        | Peel strength (gf/cm) | Cell        | Positive      | Negative       |
|----------------|-----------------------|-------------|---------------|----------------|
| electrical     | electrode/            |             |               |                |
| electrode/     | resistivity           | Example No. | separator     | separator      |
| (.OMEGA.)      | Embodiment 1          |             |               |                |
| 18             | 10                    | 22          | Embodiment 2  | 15 13 23       |
|                |                       |             | Embodiment 3  | 19 11 25       |
| Embodiment 4   | 23                    | 33          | 31            |                |
| Embodiment 5   | 20                    | 40          | 35            | Embodiment 6   |
|                |                       |             |               | 26 19 20       |
| Embodiment 7   | 27                    |             |               |                |
| 21             | 21                    | Embodiment  |               |                |
| 8              | 26                    | 35          | 21            | Embodiment 9   |
|                |                       |             |               | 25 37 20       |
| Embodiment 10  |                       |             |               | 25 36 22       |
| Embodiment 11  | 26                    | 35          |               |                |
| 23             | Comp.Example1         | 31          | 33            | 150            |
|                |                       |             | Comp.Example2 | 0 0 20         |
| (immeasurable) |                       |             |               |                |
| (immeasurable) | Comp.Example3         | 0           | 0             | 20             |
| (immeasurable) |                       |             |               | (immeasurable) |